AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Canceled).

2. (Currently Amended) The shredding machine of claim [[1]] 3, wherein predetermined perforations are formed in the shredder main body below the throw-in port.

3. (Currently Amended) A shredding machine for finely shredding a shredable object, comprising:

a plurality of rotational shafts extending in parallel in a longitudinal direction so as to support cutting blades in the transverse direction inside a shredder main body, wherein the cutting blade is provided with a plurality of cutting portions protruding from the peripheral of the cutting blade, and the cutting blades are disposed in the longitudinal direction of the rotational shafts so that the cutting portions engage with each other;

a throw-in port for the shredable object provided in an upper portion of the shredder main body; and

a discharge port for the shredable object provided in a lower portion of the shredder main body;

wherein in order to finely crush the shredable object thrown into the throw-in port, inside the shredder main body, the discharge port is disposed so as to be offset in the longitudinal direction of the rotational shafts with respect to the throw-in port so that the shredable object is scraped up from the lower portion to the upper portion while traveling downstream from a throw-in port side to a discharge port side, to crush the shredable object several times before discharge of portions of the crushed object through the discharge port,

~~The shredding machine of claim 1,~~ wherein a spiral traversing member is provided [[in]] on an inner wall of the shredder main body with the spiral traversing member configured to assist in causing the object to travel upwardly and downstream in the longitudinal direction as the object is being crushed ~~so that it traverses the shredable object from the throw-in port side to the discharge port side, while forwarding the shredable object from the lower portion on the throw-in port side toward the upper portion on the discharge port side~~.

4. (Currently Amended) The shredding machine of claim 3, wherein the spiral traversing member is configured to be a spiral protruded member ~~for traversing~~ that is provided on the inner wall of the shredder main body, up to approximately an upper end position of the cutting blade.

5. (Currently Amended) A shredding machine for finely shredding a shredable object, comprising:

a plurality of rotational shafts extending in parallel in a longitudinal direction so as to support cutting blades in the transverse direction inside a shredder main body, wherein the cutting blade is provided with a plurality of cutting portions protruding from the peripheral of the cutting blade, and the cutting blades are disposed in the longitudinal direction of the rotational shafts so that the cutting portions engage with each other;

a throw-in port for the shredable object provided in an upper portion of the shredder main body; and

a discharge port for the shredable object provided in a lower portion of the shredder main body;

wherein in order to finely crush the shredable object thrown into the throw-in port, inside the shredder main body, the discharge port is disposed so as to be offset in the longitudinal direction of the rotational shafts with respect to the throw-in port so that the shredable object is scraped up from the lower portion to the upper portion while traveling

downstream from a throw-in port side to a discharge port side, to crush the shredable object several times before discharge of portions the crushed object through the discharge port,

~~The shredding machine of claim 1~~, wherein in order to ~~traverse~~ assist the shredable object in the downstream travel thereof from the throw-in port side to the discharge port side, a scrape-up member that protrudes from a tip-end of the cutting blade is provided so as to rotate with the cutting blade, and which is configured to assist in causing ~~scrape up~~ the shredable object to be scraped upwardly as the object is being crushed during the downstream travel thereof from the lower portion on the throw-in port side toward the upper portion on the discharge port side.

6. (Currently Amended) The shredding machine of claim 5, wherein the scrape-up member is formed with an incline- surfaced cutting portion for scraping up the shredable object by a front surface thereof in the rotational direction, and for ~~traversing~~ assisting in causing the shredable object to travel downstream toward the discharge port side.

7. (Currently Amended) The shredding machine of claim [[1]] 3, wherein the shredder main body is configured to be tilted by arranging that the throw-in port side of the shredder main body is higher than the discharge port side ~~so that it traverses~~ to assist in causing the shredable object to travel downstream from the throw-in port side to the discharge port side using the tilt thereof.

8. (Original) The shredding machine of claim 7, wherein the tilt angle of the shredder main body is configured to be variable by providing a driver for raising and lowering the throw-in port side or the discharge port side of the shredder main body.

9. (Previously Presented) The shredding machine of claims 7, wherein the shredding machine is for finely shredding a soft waste plastic as the shredable object, and wherein the shredder main body is configured tilt by approximately 8 degrees so that it crushes the soft waste plastic thrown into the throw-in port for a plurality of times by traversing the soft waste

plastic toward the discharge port side while scraping up the soft waste plastic from the lower portion to the upper portion of the shredder main body.

10. (Currently Amended) The shredding machine of claim [[1]] 3, wherein the cutting blades are configured to be thinner on the discharge port side than on the throw-in port side so that a crush size of the shredable object is finer on the discharge port side.

11. (Original) The shredding machine of claim 10, wherein the thickness of the cutting blades between the throw-in port side and the discharge port side is configured to be thinner in a stepwise fashion from the throw-in port side.

12. (Currently Amended) The shredding machine of claim [[1]] 3, wherein the number of the cutting portions of the cutting blade on the discharge port side is configured to be more than the number of the cutting portions of the cutting blade on the throw-in port side so that a crush size of the shredable object is finer on the discharge port.

13. (Currently Amended) The shredding machine of claim [[1]] 3, wherein the cutting blades are arranged so that the cutting portions are arranged in a spiral to assist in ~~traverse~~ causing the shredable object to travel downstream from the throw-in port side to the discharge port side, by rotating.

14. (Currently Amended) The shredding machine of claim [[1]] 3, wherein a diameter of the cutting blades on the discharge port side is smaller than a diameter of the cutting blades on the throw-in port side, and a thickness of the cutting blades on the discharge port side is thinner than a thickness of the cutting blades on the throw-in port side so that a crush size is finer.

15. (Currently Amended) The shredding machine of claim [[1]] 3, wherein a lower portion of the shredder main body is configured to be ~~of~~ a damper gate ~~type~~ to open and

close, and is configured so that an amount of the shredable object being discharged from the damper gate is adjustable by adjusting an amount of opening and closing the damper gate.

16. (Currently Amended) The shredding machine of claim [[1]] 3, wherein the discharge port includes a plurality of discharge ports that are arranged between a position below the throw-in port in the shaft direction of the rotational shafts, each of the discharge ports is provided with an open/close door, respectively, and wherein the plurality of open/close doors are configured to be open and close.

17. (Canceled).

18. (Canceled).

19. (Currently Amended) The shredding machine of claim [[18]] 3, wherein a slide gate that is slidable in the ~~shaft~~ longitudinal direction of the rotational shafts is provided to ~~the discharge port, and~~ allow the size of an opening of the discharge port to be selectively changed ~~is configured to be formed in an arbitrary position by sliding the slide gate to open~~.

20. (Currently Amended) The shredding machine of claim [[1]] 3, wherein a foreign object discharge port is provided to the lower portion or side portions of the shredder main body so as to be able to open and close, to discharge a foreign object mixed in the shredable object out of the crusher.

21. (Canceled).

22. (Previously Presented) The shredding machine of claims 20, wherein a foreign object pocket into which the foreign object enters is provided to the lower portion of the shredder main body, and the foreign object discharge port from which the foreign object being entered into the foreign object pocket is discharged is provided so as to open and close.

23. (Canceled).

24. (Previously Presented) The shredding machine of claims 20, wherein a foreign object pocket into which the foreign object enters is provided to the lower portion of the shredder main body, and a foreign object pusher that extends in the foreign object pocket from the throw-in port side to the discharge port side is provided so that the foreign object that enters into the foreign object pocket is discharged from the discharge port by the foreign object pusher.

25. (Original) The shredding machine of claim 22, wherein the foreign object discharge port is constituted by a foreign object discharge slide gate that is slidable in the shaft direction of the shredder main body, and is configured so that the lower portion of the foreign object pocket is openable by sliding the foreign object discharge slide gate.

26. (Previously Presented) The shredding machine of claims 20, wherein the foreign object discharge port is constituted by a foreign object discharge side damper for opening a side portion of the shredder main body, and the foreign object discharge side damper is configured to be openable so that the foreign object on an upper portion of the cutting blade is discharged outside the shredder main body.

27. (Currently Amended) The shredding machine of claim [[1]] 3, wherein the throw-in port is provided in a central portion of the shredder main body in the ~~shaft~~ longitudinal direction of the rotational shafts, the discharge port comprises discharge ports that are provided in both end portions of the shredder main body in the ~~shaft~~ longitudinal direction of the rotational shafts, and the ~~crusher is~~ cutting blades are configured so that ~~it crushes~~ the shredable object thrown into the throw-in port ~~for a plurality of~~ is crushed several times while ~~it traverses~~ assisting in causing the shredable object to travel downstream from the throw-in

port side to both the discharge port sides and scrapes up the shredable object from the lower portion to the upper portion.

28. (Currently Amended) The shredding machine of claim [[1]] 3, comprising a driver for independently driving each of the plurality of rotational shafts; and a control device for making the driver independently rotate the plurality of rotational shafts at different rotational speeds.

29. (Original) The shredding machine of claim 28, wherein the control device includes a function to drive the plurality of rotational shafts so as to interchange a high speed and a low speed at a predetermined interval.

30. (Original) The shredding machine of claim 28, wherein the control device includes a function to selectively perform one of drives of the plurality of rotational shafts among a normal rotation at the same rotational speed, a normal rotation of one rotational shaft at a low speed, and a reverse rotation of one rotational shaft at the low speed.

31. (Withdrawn) A shredding method, comprising:

shredding a shredable object thrown into an upper body portion of a crusher at one end portion of the crusher in a shaft direction of rotational shafts that are disposed in parallel in the shaft direction of the rotational shafts, by cutting blades that engage with each other;

traversing the shredable object toward the other end portion in the shaft direction of the rotational shafts while shredding the crushed shredable object for a plurality of times by the cutting blades; and

discharging the crushed shredable object from the other end portion in the shaft direction of the rotational shafts.

32. (Withdrawn) The shredding method of claim 31, wherein the shredable object that is smaller than a predetermined perforation among the shredable objects, and the shredable

object that is crushed first by the cutting blades and becomes smaller than the predetermined perforation are discharged at a position below the throw-in port; and wherein the shredable object that is larger than the predetermined perforation is crushed for a plurality of times by the cutting blades while being traversed toward the other end portion in the shaft direction of the rotational shafts.

33. (Withdrawn) The shredding method of claims 31, wherein the crushed shredable object is re-crushed between the cutting blades while being scraped up from the lower portion on the throw-in port side to the upper portion on the discharge port side.

34. (New) The shredding machine of claim 5, wherein predetermined perforations are formed in the shredder main body below the throw-in port.

35. (New) The shredding machine of claim 5, wherein the shredder main body is configured to be tilted by arranging that the throw-in port side of the shredder main body is higher than the discharge port side to assist in causing the shredable object to travel downstream from the throw-in port side to the discharge port side using the tilt thereof.

36. (New) The shredding machine of claim 35, wherein the tilt angle of the shredder main body is configured to be variable by providing a driver for raising and lowering the throw-in port side or the discharge port side of the shredder main body.

37. (New) The shredding machine of claims 35, wherein the shredding machine is for finely shredding a soft waste plastic as the shredable object, and wherein the shredder main body is configured tilt by approximately 8 degrees so that it crushes the soft waste plastic thrown into the throw-in port for a plurality of times by traversing the soft waste plastic toward the discharge port side while scraping up the soft waste plastic from the lower portion to the upper portion of the shredder main body.

38. (New) The shredding machine of claim 5, wherein the cutting blades are configured to be thinner on the discharge port side than on the throw-in port side so that a crush size of the shredable object is finer on the discharge port side.

39. (New) The shredding machine of claim 38, wherein the thickness of the cutting blades between the throw-in port side and the discharge port side is configured to be thinner in a stepwise fashion from the throw-in port side.

40. (New) The shredding machine of claim 5, wherein the number of the cutting portions of the cutting blade on the discharge port side is configured to be more than the number of the cutting portions of the cutting blade on the throw-in port side so that a crush size of the shredable object is finer on the discharge port.

41. (New) The shredding machine of claim 5, wherein the cutting blades are arranged so that the cutting portions are arranged in a spiral to assist in causing the shredable object to travel downstream from the throw-in port side to the discharge port side, by rotating.

42. (New) The shredding machine of claim 5, wherein a diameter of the cutting blades on the discharge port side is smaller than a diameter of the cutting blades on the throw-in port side, and a thickness of the cutting blades on the discharge port side is thinner than a thickness of the cutting blades on the throw-in port side so that a crush size is finer.

43. (New) The shredding machine of claim 5, wherein a lower portion of the shredder main body is configured to be a damper gate to open and close, and is configured so that an amount of the shredable object being discharged from the damper gate is adjustable by adjusting an amount of opening and closing the damper gate.

44. (New) The shredding machine of claim 5, wherein the discharge port includes a plurality of discharge ports that are arranged between a position below the throw-in port in

the shaft direction of the rotational shafts, each of the discharge ports is provided with an open/close door, respectively, and wherein the plurality of open/close doors are configured to be open and close.

45. (New) The shredding machine of claim 5, wherein a slide gate that is slidable in the longitudinal direction of the rotational shafts is provided to allow the size of an opening of the discharge port to be selectively changed.

46. (New) The shredding machine of claim 5, wherein a foreign object discharge port is provided to the lower portion or side portions of the shredder main body so as to be able to open and close, to discharge a foreign object mixed in the shredable object out of the crusher.

47. (New) The shredding machine of claims 46, wherein a foreign object pocket into which the foreign object enters is provided to the lower portion of the shredder main body, and the foreign object discharge port from which the foreign object being entered into the foreign object pocket is discharged is provided so as to open and close.

48. (New) The shredding machine of claims 46, wherein a foreign object pocket into which the foreign object enters is provided to the lower portion of the shredder main body, and a foreign object pusher that extends in the foreign object pocket from the throw-in port side to the discharge port side is provided so that the foreign object that enters into the foreign object pocket is discharged from the discharge port by the foreign object pusher.

49. (New) The shredding machine of claim 47, wherein the foreign object discharge port is constituted by a foreign object discharge slide gate that is slidable in the shaft direction of the shredder main body, and is configured so that the lower portion of the foreign object pocket is openable by sliding the foreign object discharge slide gate.

50. (New) The shredding machine of claims 46, wherein the foreign object discharge port is constituted by a foreign object discharge side damper for opening a side portion of the shredder main body, and the foreign object discharge side damper is configured to be openable so that the foreign object on an upper portion of the cutting blade is discharged outside the shredder main body.

51. (New) The shredding machine of claim 5, wherein the throw-in port is provided in a central portion of the shredder main body in the longitudinal direction of the rotational shafts, the discharge port comprises discharge ports that are provided in both end portions of the shredder main body in the longitudinal direction of the rotational shafts, and the cutting blades are configured so that the shredable object thrown into the throw-in port is crushed several times while assisting in causing the shredable object to travel downstream from the throw-in port side to both the discharge port sides and scrapes up the shredable object from the lower portion to the upper portion.

52. (New) The shredding machine of claim 5, comprising a driver for independently driving each of the plurality of rotational shafts; and a control device for making the driver independently rotate the plurality of rotational shafts at different rotational speeds.

53. (New) The shredding machine of claim 52, wherein the control device includes a function to drive the plurality of rotational shafts so as to interchange a high speed and a low speed at a predetermined interval.

54. (New) The shredding machine of claim 52, wherein the control device includes a function to selectively perform one of drives of the plurality of rotational shafts among a normal rotation at the same rotational speed, a normal rotation of one rotational shaft at a low speed, and a reverse rotation of one rotational shaft at the low speed.